

WHAT IS CLAIMED IS:

1 1. A method of configuring a broadcast aperture for transferring data
2 between a processor and a plurality of graphics devices, the method comprising:
3 receiving allocation data for a broadcast aperture in a physical address space;
4 configuring a bridge with a first set of configuration data, wherein the bridge
5 is adapted to facilitate transferring data between a processor and a plurality of graphics
6 devices;
7 configuring the bridge with a second set of configuration data, thereby
8 activating the broadcast aperture.

1 2. The method of claim 1, wherein configuring a bridge with a first set of
2 configuration data further comprises retrieving at least a portion of the first set of
3 configuration data including a broadcast aperture size from a system configuration memory.

1 3. The method of claim 2, wherein the broadcast aperture size is set by a
2 user via a BIOS configuration utility.

1 4. The method of claim 1, wherein configuring the bridge with a second
2 set of configuration data comprises receiving at least a portion of the second set of
3 configuration data from a graphics driver associated with the plurality of graphics devices.

1 5. The method of claim 1, wherein at least one of the plurality of graphics
2 devices includes a plurality of graphics processing units.

1 6. The method of claim 1, wherein the processor executes a graphics
2 driver adapted to communicate a set of rendering commands and rendering data to the
3 plurality of graphics devices via the broadcast aperture.

1 7. The method of claim 6, wherein the set of rendering commands directs
2 a first portion of the plurality of graphics devices to render a first portion of a frame and
3 directs a second portion of the plurality of graphics devices to render a second portion of the
4 frame.

1 8. The method of claim 6, wherein the set of rendering commands directs
2 a first portion of the plurality of graphics devices to render a first frame and directs a second
3 portion of the plurality of graphics devices to render a second frame.

1 9. The method of claim 6, wherein the set of rendering commands direct
2 a first portion of the plurality of graphics devices to transfer rendered image data comprising
3 at least a portion of a frame to one of the plurality of graphics devices connected with a
4 display device.

1 10. The method of claim 9, wherein the first portion of the plurality of
2 graphics devices is adapted to transfer rendered image data to the one of the plurality of
3 graphics devices connected with a display device via a digital video connection.

1 11. The method of claim 9, wherein the first portion of the plurality of
2 graphics devices is adapted to transfer rendered image data to the one of the plurality of
3 graphics devices connected with a display device via a graphics bus using a blit operation.

1 12. The method of claim 11, wherein the rendered image data includes an
2 anti-aliased version of at least a portion of a frame.

1 13. The method of claim 11, wherein the rendered image data is associated
2 with a complex portion of a frame.

1 14. An apparatus for transferring data to a plurality of graphics devices,
2 the apparatus comprising:

3 a graphics device interface adapted to communicate a set of data with each of
4 the plurality of graphics devices; and

5 a graphics device broadcast unit responsive to the set of data received via a
6 broadcast aperture, wherein in response to receiving the set of data via the broadcast
7 aperture, the graphics device broadcast unit is adapted to communicate a copy of the set of
8 data with each of the plurality of graphics devices.

1 15. The apparatus of claim 14, wherein the graphics device broadcast unit
2 is adapted to receive the set of data from a processor via the broadcast aperture.

1 16. The apparatus of claim 14, further including a direct memory access
2 transfer unit adapted to retrieve the set of data from a memory and to communicate the set of
3 data to the graphics device broadcast unit via the broadcast aperture.

1 17. The apparatus of claim 14, wherein the graphics device broadcast unit
2 includes a broadcast aperature base address register adapted to store a memory address
3 associated with the broadcast aperature.

1 18. The apparatus of claim 17, further adapted to receive the memory
2 address associated with the broadcast aperature from a bridge driver.

1 19. The apparatus of claim 14, wherein the graphics device broadcast unit
2 includes a broadcast aperature size register adapted to store a size value associated with the
3 broadcast aperature.

1 20. The apparatus of claim 19, further adapted to receive the size value
2 associated with the broadcast aperature from a bridge driver, wherein the bridge driver is
3 adapted to retrieve the size value associated with the broadcast aperature from a system
4 configuration memory.

1 21. The apparatus of claim 14, wherein the graphics device broadcast unit
2 includes a plurality of unicast aperature base address registers corresponding with the
3 plurality of graphics devices, each unicast aperature base address register adapted to store a
4 memory address associated with a unicast aperature of one of the plurality of graphics
5 devices; and

6 wherein the graphics device interface is adapted to communicate a copy of the
7 set of data with the each of plurality of graphics devices via its associated unicast aperature.

1 22. The apparatus of claim 21, further adapted to receive the memory
2 addresses associated with the unicast aperatures of the plurality of graphics devices from a
3 graphics driver via a bridge driver.